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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/506,843	05/31/2005	David Graham Taylor	045637-005	4671
25461 7590 09/29/2009 SMITH, GAMBRELL & RUSSELL SUITE 3100, PROMENADE II 1230 PEACHTREE STREET, N.E. ATLANTA, GA 30309-3592				
EXAMINER JACKSON, MONIQUE R				
ART UNIT		PAPER NUMBER		
1794				
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09/29/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/506,843

Applicant(s)

TAYLOR, DAVID GRAHAM

Examiner

Monique R. Jackson

Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 10-12, 14-19, 23-27, 40 and 41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 10-12, 14-19, 23-27, 40 and 41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/13/09 has been entered.
2. The amendment filed 7/13/09 has been entered. Claims 8, 9, 20-22, and 28-39 have been canceled. Claims 1-7, 10-12, 14-19, 23-27 and 40-41 are pending in the application. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

3. Claim 5 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 5 recites the limitation "wherein the barrier layer has a permeability to oxygen of less than about 0" however the disclosure at the time of filing does not support the open-ended limitation, and more particularly for an oxygen permeability less than zero.

Claim Rejections - 35 USC § 102

4. Claims 40-41 are rejected under 35 U.S.C. 102(b) as being anticipated by King (USPN 3,821,135.) King teaches a granular cork-polyurethane composition and products produced from the composition wherein cork particles and reactive hot melt polyurethane are mixed and molded

by application of heat and pressure to produce a molded article having a desired shape formed from polyurethane impregnated cork particles (Entire document; particularly Abstract; Col. 2, line 15-Col. 4, line 64; Col. 5, line 28-33.) King teaches that typical molded articles include gaskets and seals as well as others recited at Col. 6, lines 4-13, wherein the Examiner takes the position that the recitation of "seals" as well as some of the articles listed read upon the broad term "stopper" given that they are able to be "inserted into a receptacle to close an opening in the receptacle" (Col. 6, lines 4-15.) King further teaches that the molded article may be coated with a polyvinylchloride plastisol; or another layer of material, such as metal and plastic, may be adhesively bonded to the shaped article by pressing the layer of material into or in contact with the shaped cork article and employing sufficient heat to soften the polyurethane resin to securely bond the layer to the article formed from the impregnated cork particles (wherein the Examiner takes the position that the "allowing...to cool" step is inherent; Col. 9, line 13-27.) King also teaches that the layer may be securely bonded by only heat and pressure, and that an alternative method involves place the layer of material in contact with the impregnated cork particles when the particles are deposited in the mold cavity and then pressing the layer into the particles during the molding or shaping operation (Col. 9, lines 16-25; hence reads upon the broad limitation of "pushed into a cup".) King teaches that the polyurethane is an excellent adhesive when employed in this manner (Col. 9, lines 25-27.) King also teaches that one can coat an adhesive on one or both surfaces of the layer and article which intercontact and, with little pressure, bond the two together in a conventional manner wherein suitable adhesives including polyurethane resins (Col. 9, lines 27-35.) Hence, King teaches a molded article, such as gaskets or seals or other shaped article including those suitable as a "stopper", formed from reactive hot melt polyurethane resin-

impregnated cork particles that are molded into a desired shape and bonded to a layer of material such as metal or plastic via the reactive hot melt polyurethane surface present on the molded article surface, or via a separate adhesive coating layer which may also be polyurethane; wherein the Examiner takes the position that the adhesive surface or coat along with the layer of material read upon the claimed "barrier layer", and the metal or the plastic or the PVC coating reads upon the sub-layer having lower oxygen permeability.

Claim Rejections - 35 USC § 103

5. Claims 1-7, 10-11, 17, and 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over King (USPN 3,821,135.) As discussed above, King teaches a molded article, such as gaskets or seals or other shaped article including those suitable as a "stopper", formed from reactive hot melt polyurethane resin-impregnated cork particles that are molded into a desired shape and bonded to a layer of material such as metal or plastic via the reactive hot melt polyurethane surface present on the molded article surface, or via a separate adhesive coating layer which may also be polyurethane and one would obviously look towards utilizing the same reactive hot melt resins disclosed; wherein the Examiner takes the position that the adhesive surface or coat along with the layer of material read upon the claimed "barrier layer", and the metal or the plastic or the PVC coating reads upon the sub-layer having lower oxygen permeability. King does not teach the thickness of the adhesive surface or coat and the layer of material such that the total thickness is as instantly claimed, "from about 0.05 to about 100 microns". However, one having ordinary skill in the art at the time of the invention would have been motivated to utilize routine experimentation to determine the desired thickness, and hence resulting oxygen permeability, for a particular end use of the molded article, wherein layer

thickness is a known result-effective variable affecting the mechanical and barrier properties of the final end product including oxygen permeability, and given the cork sizes and example articles disclosed by King, a layer thickness on the same order of magnitude, micron scale, would have been obvious to one having ordinary skill in the art at the time of the invention, and would have resulted in similar oxygen permeability values. In terms of Claims 10-11, King further teaches that the polyurethane resin may include various additives such as conventional pigments and dyes or filled with conventional fillers that possess an average particle size of less than about one micron, but fails to particularly recite those as instantly claimed in Claim 11. However, the additives recited, particularly metal oxides and clays, are known, conventional additives or pigments utilized in the art and would have been obvious to one having ordinary skill in the art at the time of the invention. In terms of Claims 24 and 25, the Examiner takes the position that the recitations "for a bottle" and "wine bottle" constitute intended use of the "stopper" and given that the article taught by King is capable of being utilized for the same purpose, it reads upon these claims.

6. Claims 12, 14-16, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over King as presented above and in view of the admitted prior art, or Conrad (USPN 6,152,966) or JP 05-031831 or WO 00/64647 or WO 00/64649 or WO'378. The teachings of King are discussed above. Though King teaches that the cork composition can be formed into various molded articles including gaskets and seals, King does not specifically teach the claimed stopper cylindrical shape with two faces. However, given that cork compositions are conventional utilized to form wine bottle stoppers having the claimed cylindrical shape, one having ordinary skill in the art at the time of the invention would have been motivated to determine the desired

shape of the molded cork article for a particular end use wherein the claimed structures are obvious structures for a cork article and typically utilized in the art as stoppers for wine bottles as evidenced by the admitted prior art or Conrad or JP'831 or WO'647 or WO'649 or WO'378, including rounded or beveled faces, a face with an incorporated gasket, coatings on one or both faces, partial coating, and coatings parallel to the faces on the faces or within the cork.

7. Claims 12, 14-16, 18, 19 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over King as presented above and in view of WO'647. The teachings of King are discussed above. Though King teaches that the cork composition can be formed into various molded articles including gaskets and seals, King does not specifically teach the claimed stopper cylindrical shape with two faces. However, given that cork compositions are conventional utilized to form wine bottle stoppers having the claimed cylindrical shape, one having ordinary skill in the art at the time of the invention would have been motivated to determine the desired shape of the molded cork article for a particular end use wherein the claimed structures are obvious structures for a cork article and typically utilized in the art as stoppers for wine bottles as evidenced by WO'647 wherein WO'647 further teaches the use of ethylene vinyl alcohol as a barrier film applied to the cork stopper to provide improved barrier properties. Hence, one having ordinary skill in the art at the time of the invention would have been motivated to utilize ethylene vinyl alcohol or other barrier polymer taught by WO'647 as the polymer layer material to be adhered to the molded cork article via the reactive hot melt polyurethane coating, wherein one skilled in the art at the time of the invention would have been motivated to utilize routine experimentation to determine the optimum polymer layer or barrier layer thickness to provide the desired barrier properties for a particular end use.

Response to Arguments

8. Applicant's arguments filed 7/13/09 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monique R. Jackson whose telephone number is 571-272-1508. The examiner can normally be reached on Mondays-Thursdays, 10:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on 571-272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Monique R Jackson/
Primary Examiner, Art Unit 1794
September 25, 2009